



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/824,464	04/15/2004	Masahiro Hora	P25084	6197
7055 7590 04/29/2008 GREENBLUM & BERNSTEIN, P.L.C. 1950 ROLAND CLARKE PLACE RESTON, VA 20191				
EXAMINER HOLLIDAY, JAIME MICHELE				
ART UNIT 2617		PAPER NUMBER		
NOTIFICATION DATE 04/29/2008		DELIVERY MODE ELECTRONIC		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

gbpatent@gbpatent.com

pto@gbpatent.com

Office Action Summary

Application No.

10/824,464

Applicant(s)

HORA ET AL.

Examiner

JAIME M. HOLLIDAY

Art Unit

2617

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 January 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SE-08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on January 11, 2008 has been entered.

Response to Amendment

Response to Arguments

2. Applicant's arguments with respect to **claims 1-26** have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation

under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. **Claims 1-10, 13, 14, 17 and 18** are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of **Waesterlid (WO 01/65807 A2)** and **Eiden et al. (Pub # U.S. 2002/0168992 A1)** in view of **Kawaguchi et al. (Pub # U.S. 2002/0037736 A1)**, and in further view of **Mizutani et al. (US 2001/0022780 A1)**.

Consider **claim 1**, Waesterlid clearly shows and discloses a connectionless status reporting method that allows members of an affinity group to send status information to and receive status information from other members of the affinity group, which is well-suited for mobile communication networks, wherein each member of the affinity group is provided with a communication device. Each communication device includes a memory for storing memory status information, reading on the claimed "A mail exchange system comprising: a plurality of terminal devices connected to one another via a communications network, each terminal device having a member information storage that stores member information of members who belong to a group that exchange mail via said communications network, the plurality of the terminal devices comprising a specific member terminal, an existing member terminal, and a newly joining member terminal," (pg. 2 lines 15-29).

The user creating the affinity group, reading on the claimed "specific member terminal," becomes the owner of the group and is referred to as the group administrator, who also sends a membership request message inviting one or more other users to join the affinity group. Recipients of the membership request can reply to the invitation by sending a membership reply message either accepting or declining the invitation to join the affinity group, reading on the claimed "participation mail receiver that receives a participation mail, including member information of a member who newly joins the group, from said newly joining member terminal via said communications network," (pg. 11 lines 17-22). After joining the affinity group, each existing member receives a group update message from the group administrator containing names of the other members to the affinity group, reading on the claimed "new member information mail transmitter that transmits a new member mail, including the member information of the newly joining member, to said existing member terminal according to information stored in said member information storage via said communications network," (pg. 11 lines 23-25).

Each existing member receives a group update message that contains a list of all members of the group, including the newly added member, reading on the claimed "existing member terminal including a new member information mail receiver that receives the new member mail," (pg. 11 lines 23-25, pg. 14 lines 3-5).

Recipients of the membership request can reply to the invitation by sending a membership reply message either accepting or declining the invitation to join the affinity group. Those accepting the invitation are added to the group along with the group administrator, reading on the claimed "newly joining member terminal including a new participation mail transmitter that transmits the new member mail, including self-member information of the newly joining member, to said specific member terminal via said communications network," (pg. 11 lines 20-23). New members also receive a group update message that contains information concerning the existing members and their current status. In the direct messaging or peer-to-peer approach, messages are sent as datagrams. For example, when the status of a member changes, the peer sends a Status Update to every other peer in the affinity group, reading on the claimed "existing member information mail receiver that receives the existing member mail from a plurality of existing member terminals," (fig. 5, pg. 11 lines 1-14, 26-28).

The membership request message contains data corresponding to each member of the affinity group, wherein the member data may include, for example, the name, address, telephone number, and current status of each member. When a group update message is sent to a messaging server and then forwarded to each member of the affinity group. The group update message contains a list of all members of the group, including the newly added member, reading on the claimed "group identification, information indicating the group

exchanging the mail, is added to the mail to be exchanged among said terminal devices of the members who belong to the group, and the group identification information comprises user identification information of the terminal device of a member who forms the group,” (pg.12 line 28- pg. 13 line 7, pg. 14 lines 2-14).

However, Waesterlid fails to specifically disclose that the group member and current members extract the newly joined members’ information.

In the same field of endeavor, Eiden et al. clearly show and disclose a method and apparatus for joining a communication group between users of wireless communication devices, comprising at least two users (302, 305) of communication devices who are members of said group and capable of communicating with each other through communication devices, and at least one communication device user (301) not belonging to said group, who is capable of communicating with at least one member (305) of the communication group through a communication device, reading on the claimed “mail exchange system comprising a plurality of terminal devices connected to one another via a communications network, the plurality of the terminal devices comprising a specific member terminal, an existing member terminal, and a newly joining member terminal,” (abstract, fig. 3a). A potential new member, i.e. applicant, reading on the claimed “newly joining member,” applies for membership from an existing member of said group. This can be done in such a manner, for instance, that the applicant creates by means of a communication application of his communication device an apply message and transmits said apply message by

his communication device to a member of the group, preferably to all the group members that are within the range of the communication device of the applicant. The apply message comprises a request for membership in said group. The apply message also comprises at least one of the following identifiers: an identifier associated with the applicant, an identifier associated with the applicant's communication device, or both the above-mentioned identifiers (paragraphs 22 and 23). When there is a membership request, the group member forms a decision on whether the applicant is suitable to be a member of the group on the basis of the information, and if the member considers the applicant suitable to be a member of the group, the member votes for the membership of the applicant and transmits his reply as feedback information to the applicant and stores the received information of the applicant in his communication device, for instance in a database register, such as a group information matrix, reading on the claimed "specific member terminal includes a first member information adder that extracts the member information included in the participation mail received by said participation mail receiver and stores the extracted member information in the member information storage; and said existing member terminal including a second member information adder that extracts the member information included in the received new member mail and stores the extracted member information in a member list in the member information storage," (paragraph 27). In FIG. 3c, E now knows that he is a member of the group, he can inform the group members of his new membership

and ask a member within the range of his communication device, in this case B, information on the group and the other members of the group. When Member B receives information that E has become a member and the request for information related to the group, information on E's membership is updated in B's communication device. B sends the information to E (reference 317), which information can comprise for instance a welcome note to the new member, information on internal matters of the group, members or how the group works, reading on the claimed "existing member terminal includes a self-information mail transmitter that transmits an existing member mail, including self-member information, to said newly joining member terminal via said communications network," (paragraph 35).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to allow wireless communication devices in the group to receive and store information on new members, and send their information in return as taught by Eiden et al., in the communication method of Waesterlid, in order to allow users to communicate in a group with other member wireless communication devices.

However, Waesterlid, as modified by Eiden et al., fails to specifically disclose that the received existing member mail is from terminals other than the specific member terminal.

In the same field of endeavor, Kawaguchi et al. clearly show and disclose a group communication method, which can autonomously build up a closed

communication network among a plurality of, unspecified communication terminals. When the user selects the connection input key **41** and selects the new CUG **45** at the new terminal **1D**, the new calling message **101** is broadcast to a large number of unspecified radio terminals. Upon receiving the group communication message **108**, the terminal **1D** registers a new administration information entry including the group identifier and the group kind extracted from the received message in the provisional group list **250B**. When the user of the terminal **1D** selects the group identifier, which is indicated by the group communication message and instructs the connection on the console screen, the terminal **1D** transmits a participation confirmation message **109** in a unicast manner to a transmission source of the group communication message (here, the radio terminal **1B**). The radio terminal **1B** which becomes the transmission source of the addition notice message **110** and other radio terminals (**1A**, **1C**) of the CUG (closed communication) which have received the addition notice message **110** respectively generate the reception confirmation message **111** and transmits the message to the new terminal **1D** in a unicast manner. The reception confirmation message **111** includes a message kind code indicative of the reception confirmation, a destination terminal address (address of the radio terminal ID), a group identifier, a transmission terminal address and user information of transmission terminal. As the user information, the user name is set, for example. The new terminal **1D** registers the transmission terminal address and the user information, which are extracted from the received

reception confirmation message within a fixed time (T5) in the terminal list **260B** and thereafter participates in the group communication as a member of the CUG, reading on the claimed "member information generator that generates a member list stored in the member information storage by extracting the self-member information from the received existing member mail from the plurality of existing member terminals, other than the specific member terminal," (paragraphs 6, 83-85 and 88).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to allow a new terminal to extract information about members of a closed communication group upon joining the group as taught by Kawaguchi et al., in the communication method of Waesterlid, as modified by Eiden et al., in order to allow users to communicate in a group with other member wireless communication devices.

However, the combination of Waesterlid and Eiden et al., as modified by Kawaguchi et al., fails to specifically disclose that the time the group is formed is included in correspondence.

In the same field of endeavor, Mizutani et al. clearly show and disclose a communication method to perform an on-demand type of group communication among a plurality of communication terminals, wherein a terminal that communicates sends a packet with appending the information about a valid time period of the group, as well as its own identification information, then a terminal that received the packet storing the identification information and the information

about the valid time period that are included in the packet, reading on the claimed "group identification information comprises user identification information of the terminal device of a member who forms the group and a time when said group is formed," (fig. 3, paragraphs 12, 16). A communication terminal that desires to communicate in this party forms a momentary group with adjoining communication terminals and avoids the increase of the amount of communication attendant on broadcast by communicating only with the members of this group. The structure of the packet that is used consists of header and payload that is the content of data. The header consists of packet ID, valid time period of packet, hop count, group ID, originator ID, belonging to group time period, and error correcting code. Group ID **34** is a unique identifier given to a group, reading on the claimed "wherein the group identification information is a unique identifier for each group, and the group identification information can be generated at the terminal device of the member who forms the group," (paragraphs 45, 46).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to include within a transmitted packet, the life of the communication group and the group's ID as taught by Mizutani et al., in the communication method of Waesterlid and Eiden et al., as modified by Kawaguchi et al., in order to allow users to communicate in a group with other member wireless communication devices.

Consider **claim 2**, the combination of Waesterlid and Eiden et al., as modified by Kawaguchi et al. and Mizutani et al., clearly shows and discloses the claimed invention **as applied to claim 1 above**, and in addition Waesterlid further discloses a member of the affinity group can withdraw from the group by sending a resignation message to the group administrator. Receipt of a resignation message by the group administrator spawns a Group Update message deleting the resigning member from the group, reading on the claimed "terminal devices further comprise a withdrawal mail transmitter that transmits withdrawal mail, including information of withdrawal from the group, to said terminal devices of all members in a member list stored in said member information storage; a withdrawal mail receiver that receives the withdrawal mail, including the information of a withdrawing member, transmitted from said withdrawal mail transmitter of the terminal device of a withdrawing member; and a member information deleter that deletes the member information of the withdrawing member from the member list in the mail member information storage," (pg. 12 lines 4).

Consider **claim 3**, the combination of Waesterlid and Eiden et al., as modified by Kawaguchi et al. and Mizutani et al., clearly shows and discloses the claimed invention **as applied to claim 1 above**, and in addition Waesterlid further discloses that a first user sends a membership request message to one or more prospective members whom the first user would like to join the affinity group, reading on the claimed "specific member terminal further includes an

invitation mail transmitter that transmits invite mail, including information for inviting participation in the group and self-member information, to said newly joining member terminal via said communications network," (pg. 12 lines 18-21). The membership request message contains data corresponding to each member of the affinity group, and when the prospective member accepts the request for membership message, the client application on the new member's communication device creates an affinity group database and stores it in memory, reading on the claimed "newly joining member terminal further includes an invitation mail receiver that receives the invite mail; and wherein said member information generator further generates the list in the member information storage based on the received invite mail," (pg. 13 lines 3-4, lines 20-22).

Consider **claim 4**, the combination of Waesterlid and Eiden et al., as modified by Kawaguchi et al. and Mizutani et al., clearly shows and discloses the claimed invention **as applied to claim 1 above**, and in addition Eiden et al. further discloses that the applicant receives the feedback of the group member, i.e. feedback information that can for instance comprise a decision accepting or rejecting the membership. The feedback can also comprise at least one of the following identifiers: an identifier associated with the sender of the feedback, i.e. group member, an identifier associated with the communication device of the sender of the feedback, or both above-mentioned identifiers, reading on the claimed "specific member terminal further includes a second self-information mail transmitter that transmits specific member mail, including self-member

information, to said newly joining member terminal in response to the participation mail received by said participation mail receiver, wherein said newly joining member terminal further includes a specific member information mail receiver that receives the specific member mail, including the self-member information of the specific member," (paragraph 24). A wireless communication device **410** comprises memory **416** for executing the functions of the communication device, and a communication application that can further comprise one or more applications **417**, such as an application for creating an apply message and applying for membership. A database **421** comprises information, such as the group information matrix that comprises information like name, address and the like on the group members. In addition, the database comprises information on the member's properties, the member's device ID, the applicant's profile and properties, and information on transmitted and received messages. The database, which comprises a structural database and a message database, has a storage space for all structural information related to the group and for messages and user information, reading on the claimed "wherein said member information generator generates the member list stored in the member information storage based on the specific member mail received by said specific member information mail receiver," (paragraph 37 and 45).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to allow a wireless communication device to send their information to a newly joined member, and have their member save

their information as taught by Eiden et al., in the communication method of Waesterlid, in order to allow users to communicate in a group with other member wireless communication devices.

Consider **claim 5**, the combination of Waesterlid and Eiden et al., as modified by Kawaguchi et al. and Mizutani et al., clearly shows and discloses the claimed invention **as applied to claim 1 above**, and in addition Waesterlid further discloses that when the group update message is received by each member, the client application on the member's communication device takes appropriate action to add, delete or modify member records in the corresponding group database, reading on the claimed "wherein the member list in the member information storage stores member information of members, who belong to the group," (pg. 14 lines 2-14).

Consider **claim 6**, the combination of Waesterlid and Eiden et al., as modified by Kawaguchi et al. and Mizutani et al., clearly shows and discloses the claimed invention **as applied to claim 5 above**, and in addition Waesterlid further discloses that the membership request message contains data corresponding to each member of the affinity group, wherein the member data may include, for example, the name, address, telephone number, and current status of each member. Only the group administrator can send a membership request message. The invitation to join an affinity group may be time limited. The time period may remain open for a predetermined time period that is set by default or for a time period that is specified by the group administrator in the

membership request message, reading on the claimed "user identification information that uniquely specifies each user is allocated to each of said terminal devices," (pg.12 line 28- pg. 13 line 7).

Consider **claim 7**, the combination of Waesterlid and Eiden et al., as modified by Kawaguchi et al. and Mizutani et al., clearly shows and discloses the claimed invention **as applied to claim 1 above**, and in addition Mizutani et al. further disclose that one or more receivers according to the first aspect of the present invention may comprise a television, a radio, a set-top box, a receiver module for a computer, a multimedia terminal, a mobile or cellular phone, a personal office assistant, a personal computer, or any combination thereof. The receivers communicate the event to any number of users which may have been reminded of the event through firstly a promotion message and secondly a reminder signal received on a communication terminal, reading on the claimed "each of the terminal devices includes a cellular phone," (pg.12 line 28- pg. 13 line 7).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to allow a peer or communication device to be a cellular phone as taught by Mizutani et al., in the communication method of Waesterlid and Eiden et al., as modified by Kawaguchi et al. in order to allow users to communicate in a group with their peer or wireless communication devices.

Consider **claim 8**, Waesterlid clearly shows and discloses a connectionless status reporting method that allows members of an affinity group to send status information to and receive status information from other members of the affinity group, which is well-suited for mobile communication networks, wherein each member of the affinity group is provided with a communication device. Each communication device includes a memory for storing memory status information, reading on the claimed "mail exchange terminal device for exchanging mail with other mail exchange terminal devices via a communications network, comprising a member information storage that stores member information of a member, who belongs to a group exchanging mail," (pg. 2 lines 15-29).

Each existing member receives a group update message that contains a list of all members of the group, including the newly added member, reading on the claimed "mail receiver that receives new member mail, including member information of a member who newly joins the group, from another mail exchange terminal device via said communications network," (pg. 11 lines 23-25, pg. 14 lines 3-5).

The membership request message contains data corresponding to each member of the affinity group, wherein the member data may include, for example, the name, address, telephone number, and current status of each member. When a group update message is sent to a messaging server and then forwarded to each member of the affinity group. The group update message

contains a list of all members of the group, including the newly added member, reading on the claimed "group identification information indicating the group exchanging the mail is added to the mail to be exchanged among said terminal devices of the members who belong to the group, and the group identification information comprises user information of the terminal device of a member who forms the group," (pg.12 line 28- pg. 13 line 7, pg. 14 lines 2-14).

However, Waesterlid fails to specifically disclose that the current members extract the newly joined members' information.

In the same field of endeavor, Eiden et al. clearly show and disclose a method and apparatus for joining a communication group between users of wireless communication devices, comprising at least two users (302, 305) of communication devices who are members of said group and capable of communicating with each other through communication devices, and at least one communication device user (301) not belonging to said group, who is capable of communicating with at least one member (305) of the communication group through a communication device, reading on the claimed "mail exchange terminal device for exchanging mail with other mail exchange terminal devices via a communications network," (abstract, fig. 3a). A potential new member, i.e. applicant, reading on the claimed "newly joining member," applies for membership from an existing member of said group by transmitting an apply message to a member of the group. The apply message comprises a request for membership in said group. The apply message also comprises at least one of the

following identifiers: an identifier associated with the applicant, an identifier associated with the applicant's communication device, or both the above-mentioned identifiers (paragraphs 22 and 23). When there is a membership request, the group member forms a decision on whether the applicant is suitable to be a member of the group on the basis of the information, and if the member considers the applicant suitable to be a member of the group, the member votes for the membership of the applicant and transmits his reply as feedback information to the applicant and stores the received information of the applicant in his communication device, for instance in a database register, such as a group information matrix, reading on the claimed "member information adder that extracts the member information included in the received new member mail and stores the extracted member information in a member list stored in the member information storage," (paragraph 27). In FIG. 3c, E now knows that he is a member of the group, he can inform the group members of his new membership and ask a member within the range of his communication device, in this case B, information on the group and the other members of the group. When Member B receives information that E has become a member and the request for information related to the group, information on E's membership is updated in B's communication device. B sends the information to E (reference 317), which information can comprise for instance a welcome note to the new member, information on internal matters of the group, members or how the group works, reading on the claimed "mail transmitter that transmits contact mail, including

self-member information to said mail exchange terminal device of the newly joining member via said communications network," (paragraph 35).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to allow wireless communication devices in the group to receive and store information on new members, and send their information in return as taught by Eiden et al., in the communication method of Waesterlid, in order to allow users to communicate in a group with other member wireless communication devices.

However, Waesterlid, as modified by Eiden et al., fails to specifically disclose that the received existing member mail is from terminals other than the specific member terminal.

In the same field of endeavor, Kawaguchi et al. clearly show and disclose a group communication method, which can autonomously build up a closed communication network among a plurality of, unspecified communication terminals. When the user selects the connection input key **41** and selects the new CUG **45** at the new terminal **1D**, the new calling message **101** is broadcast to a large number of unspecified radio terminals. Upon receiving the group communication message **108**, the terminal **1D** registers a new administration information entry including the group identifier and the group kind extracted from the received message in the provisional group list **250B**. When the user of the terminal **1D** selects the group identifier, which is indicated by the group communication message and instructs the connection on the console screen, the

terminal **1D** transmits a participation confirmation message **109** in a unicast manner to a transmission source of the group communication message (here, the radio terminal **1B**). The radio terminal **1B** which becomes the transmission source of the addition notice message **110** and other radio terminals (**1A**, **1C**) of the CUG (closed communication) which have received the addition notice message **110** respectively generate the reception confirmation message **111** and transmits the message to the new terminal **1D** in a unicast manner. The reception confirmation message **111** includes a message kind code indicative of the reception confirmation, a destination terminal address (address of the radio terminal ID), a group identifier, a transmission terminal address and user information of transmission terminal. As the user information, the user name is set, for example. The new terminal **1D** registers the transmission terminal address and the user information, which are extracted from the received reception confirmation message within a fixed time (T5) in the terminal list **260B** and thereafter participates in the group communication as a member of the CUG, reading on the claimed "whereby said mail exchange terminal device of the newly joining member generates entries in a member list by extracting the self-member information from contact mail received from a plurality of mail exchange terminal devices of existing members, the existing members being other than a specific member that sent an invite mail to said mail exchange terminal device of the newly joining member," (paragraphs 6, 83-85 and 88).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to allow a new terminal to extract information about members of a closed communication group upon joining the group as taught by Kawaguchi et al., in the communication method of Waesterlid, as modified by Eiden et al., in order to allow users to communicate in a group with other member wireless communication devices.

However, the combination of Waesterlid and Eiden et al., as modified by Kawaguchi et al., fails to specifically disclose that the time the group is formed is included in correspondence.

In the same field of endeavor, Mizutani et al. clearly show and disclose a communication method to perform an on-demand type of group communication among a plurality of communication terminals, wherein a terminal that communicates sends a packet with appending the information about a valid time period of the group, as well as its own identification information, then a terminal that received the packet storing the identification information and the information about the valid time period that are included in the packet, reading on the claimed "group identification information comprises user identification information of the terminal device of a member who forms the group and a time when said group is formed," (fig. 3, paragraphs 12, 16). A communication terminal that desires to communicate in this party forms a momentary group with adjoining communication terminals and avoids the increase of the amount of communication attendant on broadcast by communicating only with the members

of this group. The structure of the packet that is used consists of header and payload that is the content of data. The header consists of packet ID, valid time period of packet, hop count, group ID, originator ID, belonging to group time period, and error correcting code. Group ID **34** is a unique identifier given to a group, reading on the claimed "wherein the group identification information is a unique identifier for each group, and the group identification information can be generated at the terminal device of the member who forms the group," (paragraphs 45, 46).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to include within a transmitted packet, the life of the communication group and the group's ID as taught by Mizutani et al., in the communication method of Waesterlid and Eiden et al., as modified by Kawaguchi et al., in order to allow users to communicate in a group with other member wireless communication devices.

Consider **claim 9**, the combination of Waesterlid and Eiden et al., as modified by Kawaguchi et al. and Mizutani et al., clearly shows and discloses the claimed invention **as applied to claim 8 above**, and in addition Waesterlid further discloses that the user creating the affinity group, reading on the claimed "specific member terminal," becomes the owner of the group and is referred to as the group administrator, who also sends a membership request message inviting one or more other users to join the affinity group. After joining the affinity group, each existing member receives a group update message from the group

administrator containing names of the other members to the affinity group, reading on the claimed "the received new member mail is transmitted from said mail exchange terminal device of a specific member, who already belongs to the group, to terminals of other members according to the list stored in the member information storage," (pg. 11 lines 23-25).

Consider **claim 10**, Waesterlid clearly shows and discloses a connectionless status reporting method that allows members of an affinity group to send status information to and receive status information from other members of the affinity group, which is well-suited for mobile communication networks, wherein each member of the affinity group is provided with a communication device. Each communication device includes a memory for storing memory status information, reading on the claimed "mail exchange terminal device for exchanging mail with other mail exchange terminal devices via a communications network, comprising a member information storage that stores member information of a member, who belongs to a group for exchanging mail," (pg. 2 lines 15-29).

The user creating the affinity group, reading on the claimed "specific member terminal," becomes the owner of the group and is referred to as the group administrator, who also sends a membership request message inviting one or more other users to join the affinity group. Recipients of the membership request can reply to the invitation by sending a membership reply message either accepting or declining the invitation to join the affinity group, reading on the

claimed "mail receiver that receives participation mail, including member information of a member, who newly joins in the group, from a mail exchange terminal device of the newly joining member via said communications network," (pg. 11 lines 17-22). After joining the affinity group, each existing member receives a group update message from the group administrator containing names of the other members to the affinity group, reading on the claimed "mail transmitter that transmits new member mail including the member information of the newly joining member to terminal devices of other existing members according to the list stored in the member information storage via said communications network," (pg. 11 lines 23-25).

The membership request message contains data corresponding to each member of the affinity group, wherein the member data may include, for example, the name, address, telephone number, and current status of each member. When a group update message is sent to a messaging server and then forwarded to each member of the affinity group. The group update message contains a list of all members of the group, including the newly added member, reading on the claimed "group identification information indicating the group exchanging the mail is added to the mail to be exchanged among said terminal devices of the members who belong to the group, and the group identification information comprises user information of the terminal device of a member who forms the group," (pg.12 line 28- pg. 13 line 7, pg. 14 lines 2-14).

However, Waesterlid fails to specifically disclose that the group member extract the newly joined members information.

In the same field of endeavor, Eiden et al. clearly show and disclose a method and apparatus for joining a communication group between users of wireless communication devices, comprising at least two users (302, 305) of communication devices who are members of said group and capable of communicating with each other through communication devices, and at least one communication device user (301) not belonging to said group, who is capable of communicating with at least one member (305) of the communication group through a communication device, reading on the claimed "mail exchange terminal device for exchanging mail with other mail exchange terminal devices via a communications network," (abstract, fig. 3a). A potential new member, i.e. applicant, reading on the claimed "newly joining member," applies for membership from an existing member of said group. This can be done in such a manner, for instance, that the applicant creates by means of a communication application of his communication device an apply message and transmits said apply message by his communication device to a member of the group, preferably to all the group members that are within the range of the communication device of the applicant. The apply message comprises a request for membership in said group. The apply message also comprises at least one of the following identifiers: an identifier associated with the applicant, an identifier associated with the applicant's communication device, or both the above-

mentioned identifiers (paragraphs 22 and 23). When there is a membership request, the group member forms a decision on whether the applicant is suitable to be a member of the group on the basis of the information, and if the member considers the applicant suitable to be a member of the group, the member votes for the membership of the applicant and transmits his reply as feedback information to the applicant and stores the received information of the applicant in his communication device, for instance in a database register, such as a group information matrix, reading on the claimed "member information adder that extracts the member information included in the received mail and stores the extracted member information in a member list stored in the member information storage," (paragraph 27).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to allow wireless communication devices in the group to receive and store information on new members, and send their information in return as taught by Eiden et al., in the communication method of Waesterlid, in order to allow users to communicate in a group with other member wireless communication devices.

However, Waesterlid, as modified by Eiden et al., fails to specifically disclose that the received existing member mail is from terminals other than the specific member terminal.

In the same field of endeavor, Kawaguchi et al. clearly show and disclose a group communication method, which can autonomously build up a closed

communication network among a plurality of, unspecified communication terminals. When the user selects the connection input key **41** and selects the new CUG **45** at the new terminal **1D**, the new calling message **101** is broadcast to a large number of unspecified radio terminals. Upon receiving the group communication message **108**, the terminal **1D** registers a new administration information entry including the group identifier and the group kind extracted from the received message in the provisional group list **250B**. When the user of the terminal **1D** selects the group identifier, which is indicated by the group communication message and instructs the connection on the console screen, the terminal **1D** transmits a participation confirmation message **109** in a unicast manner to a transmission source of the group communication message (here, the radio terminal **1B**). The radio terminal **1B** which becomes the transmission source of the addition notice message **110** and other radio terminals (**1A**, **1C**) of the CUG (closed communication) which have received the addition notice message **110** respectively generate the reception confirmation message **111** and transmits the message to the new terminal **1D** in a unicast manner. The reception confirmation message **111** includes a message kind code indicative of the reception confirmation, a destination terminal address (address of the radio terminal ID), a group identifier, a transmission terminal address and user information of transmission terminal. As the user information, the user name is set, for example. The new terminal **1D** registers the transmission terminal address and the user information, which are extracted from the received

reception confirmation message within a fixed time (T5) in the terminal list **260B** and thereafter participates in the group communication as a member of the CUG, reading on the claimed "wherein the other existing members transmit contact mail, including member information, to the terminal device of the newly joining member so that the newly joining member generates an entry in a member list by extracting the member information from the contact mail of the other existing members, other than a specific member that sent an invite mail to said mail exchange terminal device of the newly joining member," (paragraphs 6, 83-85 and 88).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to allow a new terminal to extract information about members of a closed communication group upon joining the group as taught by Kawaguchi et al., in the communication method of Waesterlid, as modified by Eiden et al., in order to allow users to communicate in a group with other member wireless communication devices.

However, the combination of Waesterlid and Eiden et al., as modified by Kawaguchi et al., fails to specifically disclose that the time the group is formed is included in correspondence.

In the same field of endeavor, Mizutani et al. clearly show and disclose a communication method to perform an on-demand type of group communication among a plurality of communication terminals, wherein a terminal that communicates sends a packet with appending the information about a valid time

period of the group, as well as its own identification information, then a terminal that received the packet storing the identification information and the information about the valid time period that are included in the packet, reading on the claimed "group identification information comprises user identification information of the terminal device of a member who forms the group and a time when said group is formed," (fig. 3, paragraphs 12, 16). A communication terminal that desires to communicate in this party forms a momentary group with adjoining communication terminals and avoids the increase of the amount of communication attendant on broadcast by communicating only with the members of this group. The structure of the packet that is used consists of header and payload that is the content of data. The header consists of packet ID, valid time period of packet, hop count, group ID, originator ID, belonging to group time period, and error correcting code. Group ID **34** is a unique identifier given to a group, reading on the claimed "wherein the group identification information is a unique identifier for each group, and the group identification information can be generated at the terminal device of the member who forms the group," (paragraphs 45, 46).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to include within a transmitted packet, the life of the communication group and the group's ID as taught by Mizutani et al., in the communication method of Waesterlid and Eiden et al., as modified by

Kawaguchi et al., in order to allow users to communicate in a group with other member wireless communication devices.

Consider **claims 13, 19 and 23**, Waesterlid clearly shows and discloses a connectionless status reporting method that allows members of an affinity group to send status information to and receive status information from other members of the affinity group, which is well-suited for mobile communication networks, wherein each member of the affinity group is provided with a communication device. Each communication device includes program memory **112** and a microprocessor **110**, wherein the microprocessor controls the operation of the device according to the instructions stored in the memory, reading on the claimed "mail exchange terminal device for exchanging mail with other mail exchange terminal devices via a communications network, comprising a memory that stores a program and data, a processor that executes said program, and a communications device that communicates with other mail exchange terminal devices, wherein said program stored in memory causes said processor to execute storing member information of existing members, who belong to a group for exchanging mail, in said memory in advance; computer-readable storage medium on which a program to be executed by each mail exchange terminal is recorded; and a carrier wave having a program data signal," (fig. 2, pg. 2 lines 15-29, pg. 7 lines 17-28).

Each existing member receives a group update message that contains a list of all members of the group, including the newly added member, reading on

the claimed "causing said communications device to receive a contact mail including member information of a member, who newly joins the group, from another mail exchange terminal device via the communications network," (pg. 11 lines 23-25, pg. 14 lines 3-5).

A first user sends a membership request message to one or more prospective members whom the first user would like to join the affinity group, reading on the claimed "causing said communications device to transmit invite mail including self-member information to said mail exchange terminal device of the newly joining member via said communications network," (pg. 12 lines 18-21).

The membership request message contains data corresponding to each member of the affinity group, wherein the member data may include, for example, the name, address, telephone number, and current status of each member. When a group update message is sent to a messaging server and then forwarded to each member of the affinity group. The group update message contains a list of all members of the group, including the newly added member, reading on the claimed "group identification information indicating the group exchanging the mail is added to the mail to be exchanged among said terminal devices of the members who belong to the group, and the group identification information comprises user information of the terminal device of a member who forms the group," (pg.12 line 28- pg. 13 line 7, pg. 14 lines 2-14).

However, Waesterlid fails to specifically disclose that the group member and current members extract the newly joined members' information.

In the same field of endeavor, Eiden et al. clearly show and disclose a method and apparatus for joining a communication group between users of wireless communication devices, comprising at least two users (302, 305) of communication devices who are members of said group and capable of communicating with each other through communication devices, and at least one communication device user (301) not belonging to said group, who is capable of communicating with at least one member (305) of the communication group through a communication device, reading on the claimed "mail exchange terminal device for exchanging terminal devices via a communications network," (abstract, fig. 3a). A potential new member, i.e. applicant, reading on the claimed "newly joining member," applies for membership from an existing member of said group by transmitting said apply message by his communication device to a member of the group, preferably to all the group members that are within the range of the communication device of the applicant. The apply message comprises a request for membership in said group. The apply message also comprises at least one of the following identifiers: an identifier associated with the applicant, an identifier associated with the applicant's communication device, or both the above-mentioned identifiers (paragraphs 22 and 23). When there is a membership request, the group member forms a decision on whether the applicant is suitable to be a member of the group on the basis of the information, and if the member

considers the applicant suitable to be a member of the group, the member votes for the membership of the applicant and transmits his reply as feedback information to the applicant and stores the received information of the applicant in his communication device, for instance in a database register, such as a group information matrix, reading on the claimed "extracting the member information included in the received contact mail and storing the extracted member information to said memory," (paragraph 27).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to allow wireless communication devices in the group to receive and store information on new members, and send their information in return as taught by Eiden et al., in the communication method of Waesterlid, in order to allow users to communicate in a group with other member wireless communication devices.

However, Waesterlid, as modified by Eiden et al., fails to specifically disclose that the received existing member mail is from terminals other than the specific member terminal.

In the same field of endeavor, Kawaguchi et al. clearly show and disclose a group communication method, which can autonomously build up a closed communication network among a plurality of, unspecified communication terminals. When the user selects the connection input key **41** and selects the new CUG **45** at the new terminal **1D**, the new calling message **101** is broadcast to a large number of unspecified radio terminals. Upon receiving the group

communication message **108**, the terminal **1D** registers a new administration information entry including the group identifier and the group kind extracted from the received message in the provisional group list **250B**. When the user of the terminal **1D** selects the group identifier, which is indicated by the group communication message and instructs the connection on the console screen, the terminal **1D** transmits a participation confirmation message **109** in a unicast manner to a transmission source of the group communication message (here, the radio terminal **1B**). The radio terminal **1B** which becomes the transmission source of the addition notice message **110** and other radio terminals (**1A**, **1C**) of the CUG (closed communication) which have received the addition notice message **110** respectively generate the reception confirmation message **111** and transmits the message to the new terminal **1D** in a unicast manner. The reception confirmation message **111** includes a message kind code indicative of the reception confirmation, a destination terminal address (address of the radio terminal ID), a group identifier, a transmission terminal address and user information of transmission terminal. As the user information, the user name is set, for example. The new terminal **1D** registers the transmission terminal address and the user information, which are extracted from the received reception confirmation message within a fixed time (T5) in the terminal list **260B** and thereafter participates in the group communication as a member of the CUG, reading on the claimed "whereby said mail exchange terminal device of the newly joining member generates entries in a member list by extracting the self-member

information from the invite mail from said communication device, the invite mail being received from existing members other than a specific member that sent an invite mail to said mail exchange terminal device of the newly joining member," (paragraphs 6, 83-85 and 88).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to allow a new terminal to extract information about members of a closed communication group upon joining the group as taught by Kawaguchi et al., in the communication method of Waesterlid, as modified by Eiden et al., in order to allow users to communicate in a group with other member wireless communication devices.

However, the combination of Waesterlid and Eiden et al., as modified by Kawaguchi et al., fails to specifically disclose that the time the group is formed is included in correspondence.

In the same field of endeavor, Mizutani et al. clearly show and disclose a communication method to perform an on-demand type of group communication among a plurality of communication terminals, wherein a terminal that communicates sends a packet with appending the information about a valid time period of the group, as well as its own identification information, then a terminal that received the packet storing the identification information and the information about the valid time period that are included in the packet, reading on the claimed "group identification information comprises user identification information of the terminal device of a member who forms the group and a time when said

group is formed," (fig. 3, paragraphs 12, 16). A communication terminal that desires to communicate in this party forms a momentary group with adjoining communication terminals and avoids the increase of the amount of communication attendant on broadcast by communicating only with the members of this group. The structure of the packet that is used consists of header and payload that is the content of data. The header consists of packet ID, valid time period of packet, hop count, group ID, originator ID, belonging to group time period, and error correcting code. Group ID 34 is a unique identifier given to a group, reading on the claimed "wherein the group identification information is a unique identifier for each group, and the group identification information can be generated at the terminal device of the member who forms the group," (paragraphs 45, 46).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to include within a transmitted packet, the life of the communication group and the group's ID as taught by Mizutani et al., in the communication method of Waesterlid and Eiden et al., as modified by Kawaguchi et al., in order to allow users to communicate in a group with other member wireless communication devices.

Consider **claims 14, 20 and 24**, Waesterlid clearly shows and discloses a connectionless status reporting method that allows members of an affinity group to send status information to and receive status information from other members of the affinity group, which is well-suited for mobile communication networks,

wherein each member of the affinity group is provided with a communication device. Each communication device includes program memory **112** and a microprocessor **110**, wherein the microprocessor controls the operation of the device according to the instructions stored in the memory, reading on the claimed "mail exchange terminal device for exchanging mail with other mail exchange terminal devices via a communications network, comprising a memory that stores a program and data, a processor that executes said program, and a communications device that communicates with other mail exchange terminal devices, wherein said program stored in memory causes said processor to execute storing member information of existing members, who belong to a group for exchanging mail, in said memory in advance; computer-readable storage medium on which a program to be executed by each mail exchange terminal is recorded; and a carrier wave having a program data signal," (fig. 2, pg. 2 lines 15-29, pg. 7 lines 17-28).

Each existing member receives a group update message that contains a list of all members of the group, including the newly added member, reading on the claimed "causing said communications device to receive a contact mail including member information of a member, who newly joins the group, from another mail exchange terminal device via the communications network," (pg. 11 lines 23-25, pg. 14 lines 3-5). The user creating the affinity group becomes the owner of the group and is referred to as the group administrator, who also sends a membership request message inviting one or more other users to join the

affinity group. After joining the affinity group, each existing member receives a group update message from the group administrator containing names of the other members to the affinity group, reading on the claimed "causing said communications device to transmit new member mail, including the member information of the newly joining member, to said mail exchange terminal device of the existing member via said communications network," (pg. 11 lines 17-25).

The membership request message contains data corresponding to each member of the affinity group, wherein the member data may include, for example, the name, address, telephone number, and current status of each member. When a group update message is sent to a messaging server and then forwarded to each member of the affinity group. The group update message contains a list of all members of the group, including the newly added member, reading on the claimed "group identification information indicating the group exchanging the mail is added to the mail to be exchanged among said terminal devices of the members who belong to the group, and the group identification information comprises user information of the terminal device of a member who forms the group," (pg.12 line 28- pg. 13 line 7, pg. 14 lines 2-14).

However, Waesterlid fails to specifically disclose that the group member and current members extract the newly joined members' information.

In the same field of endeavor, Eiden et al. clearly show and disclose a method and apparatus for joining a communication group between users of wireless communication devices, comprising at least two users (302, 305) of

communication devices who are members of said group and capable of communicating with each other through communication devices, and at least one communication device user (301) not belonging to said group, who is capable of communicating with at least one member (305) of the communication group through a communication device, reading on the claimed "mail exchange terminal device for exchanging terminal devices via a communications network," (abstract, fig. 3a). A potential new member, i.e. applicant, reading on the claimed "newly joining member," applies for membership from an existing member of said group by transmitting said apply message by his communication device to a member of the group, preferably to all the group members that are within the range of the communication device of the applicant. The apply message comprises a request for membership in said group. The apply message also comprises at least one of the following identifiers: an identifier associated with the applicant, an identifier associated with the applicant's communication device, or both the above-mentioned identifiers (paragraphs 22 and 23). When there is a membership request, the group member forms a decision on whether the applicant is suitable to be a member of the group on the basis of the information, and if the member considers the applicant suitable to be a member of the group, the member votes for the membership of the applicant and transmits his reply as feedback information to the applicant and stores the received information of the applicant in his communication device, for instance in a database register, such as a group information matrix, reading on the claimed "extracting the member information

included in the received contact mail and storing the extracted member information to said memory," (paragraph 27).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to allow wireless communication devices in the group to receive and store information on new members, and send their information in return as taught by Eiden et al., in the communication method of Waesterlid, in order to allow users to communicate in a group with other member wireless communication devices.

However, Waesterlid, as modified by Eiden et al., fails to specifically disclose that the received existing member mail is from terminals other than the specific member terminal.

In the same field of endeavor, Kawaguchi et al. clearly show and disclose a group communication method, which can autonomously build up a closed communication network among a plurality of, unspecified communication terminals. When the user selects the connection input key **41** and selects the new CUG **45** at the new terminal **1D**, the new calling message **101** is broadcast to a large number of unspecified radio terminals. Upon receiving the group communication message **108**, the terminal **1D** registers a new administration information entry including the group identifier and the group kind extracted from the received message in the provisional group list **250B**. When the user of the terminal **1D** selects the group identifier, which is indicated by the group communication message and instructs the connection on the console screen, the

terminal **1D** transmits a participation confirmation message **109** in a unicast manner to a transmission source of the group communication message (here, the radio terminal **1B**). The radio terminal **1B** which becomes the transmission source of the addition notice message **110** and other radio terminals (**1A**, **1C**) of the CUG (closed communication) which have received the addition notice message **110** respectively generate the reception confirmation message **111** and transmits the message to the new terminal **1D** in a unicast manner. The reception confirmation message **111** includes a message kind code indicative of the reception confirmation, a destination terminal address (address of the radio terminal ID), a group identifier, a transmission terminal address and user information of transmission terminal. As the user information, the user name is set, for example. The new terminal **1D** registers the transmission terminal address and the user information, which are extracted from the received reception confirmation message within a fixed time (T5) in the terminal list **260B** and thereafter participates in the group communication as a member of the CUG, reading on the claimed "whereby said mail exchange terminal device of the newly joining member generates entries in a member list by extracting the self-member information from the contact mail from a plurality of mail exchange terminal devices of existing members, the existing members being other than a member that sent an invite mail to the newly joining member," (paragraphs 6, 83-85 and 88).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to allow a new terminal to extract information about members of a closed communication group upon joining the group as taught by Kawaguchi et al., in the communication method of Waesterlid, as modified by Eiden et al., in order to allow users to communicate in a group with other member wireless communication devices.

However, the combination of Waesterlid and Eiden et al., as modified by Kawaguchi et al., fails to specifically disclose that the time the group is formed is included in correspondence.

In the same field of endeavor, Mizutani et al. clearly show and disclose a communication method to perform an on-demand type of group communication among a plurality of communication terminals, wherein a terminal that communicates sends a packet with appending the information about a valid time period of the group, as well as its own identification information, then a terminal that received the packet storing the identification information and the information about the valid time period that are included in the packet, reading on the claimed "group identification information comprises user identification information of the terminal device of a member who forms the group and a time when said group is formed," (fig. 3, paragraphs 12, 16). A communication terminal that desires to communicate in this party forms a momentary group with adjoining communication terminals and avoids the increase of the amount of communication attendant on broadcast by communicating only with the members

of this group. The structure of the packet that is used consists of header and payload that is the content of data. The header consists of packet ID, valid time period of packet, hop count, group ID, originator ID, belonging to group time period, and error correcting code. Group ID **34** is a unique identifier given to a group, reading on the claimed "wherein the group identification information is a unique identifier for each group, and the group identification information can be generated at the terminal device of the member who forms the group," (paragraphs 45, 46).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to include within a transmitted packet, the life of the communication group and the group's ID as taught by Mizutani et al., in the communication method of Waesterlid and Eiden et al., as modified by Kawaguchi et al., in order to allow users to communicate in a group with other member wireless communication devices.

Consider **claim 17**, Waesterlid clearly shows and discloses a connectionless status reporting method that allows members of an affinity group to send status information to and receive status information from other members of the affinity group, which is well-suited for mobile communication networks, wherein each member of the affinity group is provided with a communication device. Each communication device includes a memory for storing memory status information, reading on the claimed "method for exchanging mail among terminal devices connected to one another via a communications network, each

terminal device having a member information storage that stores member information of members who belong to a group for exchanging mail," (pg. 2 lines 15-29), comprising:

recipients of the membership request replying to the invitation by sending a membership reply message either accepting or declining the invitation to join the affinity group. Those accepting the invitation are added to the group along with the group administrator, reading on the claimed "transmitting participation mail, including member information of a member who newly joins the group, to a terminal device of a specific member from said terminal device of the newly joining member via said communications network," (pg. 11 lines 20-23);

the user creating the affinity group, reading on the claimed "specific member terminal," becomes the owner of the group and is referred to as the group administrator, who also sends a membership request message inviting one or more other users to join the affinity group. Recipients of the membership request can reply to the invitation by sending a membership reply message either accepting or declining the invitation to join the affinity group, reading on the claimed "receiving the participation mail at the terminal device of the specific member," (pg. 11 lines 17-22);

after joining the affinity group, each existing member receives a group update message from the group administrator containing names of the other members to the affinity group, reading on the claimed "transmitting new member mail, including the member information of the newly joining member, to terminal

devices of other existing members from said terminal device of the specific member via said communications network according to the member information stored in said storage of said terminal device of the specific member," (pg. 11 lines 23-25);

each existing member receives a group update message that contains a list of all members of the group, including the newly added member, reading on the claimed "receiving the new member mail at said terminal devices of the other existing members," (pg. 11 lines 23-25, pg. 14 lines 3-5);

new members also receive a group update message that contains information concerning the existing members and their current status, reading on the claimed "receiving the contact mail at said terminal device of the new member," (pg. 11 lines 26-28);

The membership request message contains data corresponding to each member of the affinity group, wherein the member data may include, for example, the name, address, telephone number, and current status of each member. When a group update message is sent to a messaging server and then forwarded to each member of the affinity group. The group update message contains a list of all members of the group, including the newly added member, reading on the claimed "group identification information indicating the group exchanging the mail is added to the mail to be exchanged among said terminal devices of the members who belong to the group, and the group identification

information includes user information of the terminal device of a member who forms the group," (pg.12 line 28- pg. 13 line 7, pg. 14 lines 2-14).

However, Waesterlid fails to specifically disclose that the group member and current members extract the newly joined members' information.

In the same field of endeavor, Eiden et al. clearly show and disclose a method and apparatus for joining a communication group between users of wireless communication devices, comprising at least two users (302, 305) of communication devices who are members of said group and capable of communicating with each other through communication devices, and at least one communication device user (301) not belonging to said group, who is capable of communicating with at least one member (305) of the communication group through a communication device, reading on the claimed "method for exchanging mail among terminal devices connected to one another via a communications network, each terminal device having a member information storage that stores member information of members who belong to a group for exchanging mail," (abstract, fig. 3a). A potential new member, i.e. applicant, reading on the claimed "newly joining member," applies for membership from an existing member of said group. This can be done in such a manner, for instance, that the applicant creates by means of a communication application of his communication device an apply message and transmits said apply message by his communication device to a member of the group, preferably to all the group members that are within the range of the communication device of the applicant. The apply

message comprises a request for membership in said group. The apply message also comprises at least one of the following identifiers: an identifier associated with the applicant, an identifier associated with the applicant's communication device, or both the above-mentioned identifiers (paragraphs 22 and 23). When there is a membership request, the group member forms a decision on whether the applicant is suitable to be a member of the group on the basis of the information, and if the member considers the applicant suitable to be a member of the group, the member votes for the membership of the applicant and transmits his reply as feedback information to the applicant and stores the received information of the applicant in his communication device, for instance in a database register, such as a group information matrix, reading on the claimed "extracting the member information of the newly joining member from the received participation mail at said terminal device of the specific member and storing the extracted member information to said storage; and extracting the member information of the newly joining member from the new member mail received from said terminal devices of the specific member at said terminal device of the other existing members and storing the extracted member information in the storages of the terminal devices," (paragraph 27). In FIG. 3c, E now knows that he is a member of the group, he can inform the group members of his new membership and ask a member within the range of his communication device, in this case B, information on the group and the other members of the group. When Member B receives information that E has become

a member and the request for information related to the group, information on E's membership is updated in B's communication device. B sends the information to E (reference 317), which information can comprise for instance a welcome note to the new member, information on internal matters of the group, members or how the group works, reading on the claimed "transmitting contact mail including the members information of the existing member to said terminal devices of the new members from said terminal device of the existing member via said communications network," (paragraph 35).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to allow wireless communication devices in the group to receive and store information on new members, and send their information in return as taught by Eiden et al., in the communication method of Waesterlid, in order to allow users to communicate in a group with other member wireless communication devices.

However, Waesterlid, as modified by Eiden et al., fails to specifically disclose that the received existing member mail is from terminals other than the specific member terminal.

In the same field of endeavor, Kawaguchi et al. clearly show and disclose a group communication method, which can autonomously build up a closed communication network among a plurality of, unspecified communication terminals. When the user selects the connection input key **41** and selects the new CUG **45** at the new terminal **1D**, the new calling message **101** is broadcast

to a large number of unspecified radio terminals. Upon receiving the group communication message **108**, the terminal **1D** registers a new administration information entry including the group identifier and the group kind extracted from the received message in the provisional group list **250B**. When the user of the terminal **1D** selects the group identifier, which is indicated by the group communication message and instructs the connection on the console screen, the terminal **1D** transmits a participation confirmation message **109** in a unicast manner to a transmission source of the group communication message (here, the radio terminal **1B**). The radio terminal **1B** which becomes the transmission source of the addition notice message **110** and other radio terminals (**1A**, **1C**) of the CUG (closed communication) which have received the addition notice message **110** respectively generate the reception confirmation message **111** and transmits the message to the new terminal **1D** in a unicast manner. The reception confirmation message **111** includes a message kind code indicative of the reception confirmation, a destination terminal address (address of the radio terminal ID), a group identifier, a transmission terminal address and user information of transmission terminal. As the user information, the user name is set, for example. The new terminal **1D** registers the transmission terminal address and the user information, which are extracted from the received reception confirmation message within a fixed time (T5) in the terminal list **260B** and thereafter participates in the group communication as a member of the CUG, reading on the claimed "extracting the member information of the existing

members from the received contact mail at said terminal device of the new member and storing the extracted member information in said storage as a plurality of entries, wherein each entry is generated in response to an individual contact mail received from an associated individual terminal device of an existing member, other than the specific member," (paragraphs 6, 83-85 and 88).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to allow a new terminal to extract information about members of a closed communication group upon joining the group as taught by Kawaguchi et al., in the communication method of Waesterlid, as modified by Eiden et al., in order to allow users to communicate in a group with other member wireless communication devices.

However, the combination of Waesterlid and Eiden et al., as modified by Kawaguchi et al., fails to specifically disclose that the time the group is formed is included in correspondence.

In the same field of endeavor, Mizutani et al. clearly show and disclose a communication method to perform an on-demand type of group communication among a plurality of communication terminals, wherein a terminal that communicates sends a packet with appending the information about a valid time period of the group, as well as its own identification information, then a terminal that received the packet storing the identification information and the information about the valid time period that are included in the packet, reading on the claimed "group identification information comprises user identification information

of the terminal device of a member who forms the group and a time when said group is formed," (fig. 3, paragraphs 12, 16). A communication terminal that desires to communicate in this party forms a momentary group with adjoining communication terminals and avoids the increase of the amount of communication attendant on broadcast by communicating only with the members of this group. The structure of the packet that is used consists of header and payload that is the content of data. The header consists of packet ID, valid time period of packet, hop count, group ID, originator ID, belonging to group time period, and error correcting code. Group ID **34** is a unique identifier given to a group, reading on the claimed "wherein the group identification information is a unique identifier for each group, and the group identification information can be generated at the terminal device of the member who forms the group," (paragraphs 45, 46).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to include within a transmitted packet, the life of the communication group and the group's ID as taught by Mizutani et al., in the communication method of Waesterlid and Eiden et al., as modified by Kawaguchi et al., in order to allow users to communicate in a group with other member wireless communication devices.

Consider **claim 18**, the combination of Waesterlid and Eiden et al., as modified by Kawaguchi et al. and Mizutani et al., clearly shows and discloses the claimed invention **as applied to claim 17 above**, and in addition Waesterlid

further discloses a member of the affinity group can withdraw from the group by sending a resignation message to the group administrator. Receipt of a resignation message by the group administrator spawns a Group Update message deleting the resigning member from the group, reading on the claimed "transmitting withdrawal mail including information, indicating that a member corresponding to a terminal device is withdrawing from the group, to all other terminal devices from the withdrawing terminal device according to the stored member information; wherein the withdrawal mail is received at each of the other terminal devices; and wherein the member information corresponding to the received withdrawal mail is deleted from said member information storage at each of the other terminal devices," (pg. 12 lines 4).

6. **Claims 11, 12, 15 and 16** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Waesterlid (WO 01/65807 A2)** in view of **Kawaguchi et al. (Pub # U.S. 2002/0037736 A1)**, and in further view of **Mizutani et al. (US 2006/0019702 A1)**.

Consider **claim 11**, Waesterlid clearly shows and discloses a connectionless status reporting method that allows members of an affinity group to send status information to and receive status information from other members of the affinity group, which is well-suited for mobile communication networks, wherein each member of the affinity group is provided with a communication device. Each communication device includes a memory for storing memory status information, reading on the claimed "mail exchange terminal device for

exchanging mail with other mail exchange terminal devices via a communications network, comprising a member information storage that stores member information of a member, who belongs to a group for exchanging mail," (pg. 2 lines 15-29).

A first user sends a membership request message to one or more prospective members whom the first user would like to join the affinity group (pg. 12 lines 18-21). The membership request message contains data corresponding to each member of the affinity group, and when the prospective member accepts the request for membership message, the client application on the new member's communication device creates an affinity group database and stores it in memory, reading on the claimed "invitation mail receiver that receives invite mail for inviting participation in a group for exchanging mail that is already formed by a user of a specific mail exchange terminal device via said communications network," (pg. 13 lines 3-4, lines 20-22). Recipients of the membership request can reply to the invitation by sending a membership reply message either accepting or declining the invitation to join the affinity group. Those accepting the invitation are added to the group along with the group administrator, reading on the claimed "mail transmitter that transmits participation mail, including self-member information of a newly joining member, to the specific mail exchange terminal device via said communications network at the time of joining the group in response to participation invited by the received invite mail," (pg. 11 lines 20-23). New members also receive a group update message that contains

information concerning the existing members and their current status, reading on the claimed "existing member information mail receiver that receives contact mail including member information of other existing members, which is transmitted from the mail exchange terminal devices of other existing members via said communications network in response to the participation mail transmitted to said mail exchange terminal device of the specific member," (pg. 11 lines 26-28).

The membership request message contains data corresponding to each member of the affinity group, wherein the member data may include, for example, the name, address, telephone number, and current status of each member. When a group update message is sent to a messaging server and then forwarded to each member of the affinity group. The group update message contains a list of all members of the group, including the newly added member, reading on the claimed "group identification information indicating the group exchanging the mail is added to the mail to be exchanged among said terminal devices of the members who belong to the group, and the group identification information includes user information of the terminal device of a member who forms the group," (pg.12 line 28- pg. 13 line 7, pg. 14 lines 2-14).

However, Waesterlid fails to specifically disclose that the contact mail is from existing members and not the specific member.

In the same field of endeavor, Kawaguchi et al. clearly show and disclose a group communication method, which can autonomously build up a closed communication network among a plurality of, unspecified communication

terminals. When the user selects the connection input key **41** and selects the new CUG **45** at the new terminal **1D**, the new calling message **101** is broadcast to a large number of unspecified radio terminals. Upon receiving the group communication message **108**, the terminal **1D** registers a new administration information entry including the group identifier and the group kind extracted from the received message in the provisional group list **250B**. When the user of the terminal **1D** selects the group identifier, which is indicated by the group communication message and instructs the connection on the console screen, the terminal **1D** transmits a participation confirmation message **109** in a unicast manner to a transmission source of the group communication message (here, the radio terminal **1B**). The radio terminal **1B** which becomes the transmission source of the addition notice message **110** and other radio terminals (**1A**, **1C**) of the CUG (closed communication) which have received the addition notice message **110** respectively generate the reception confirmation message **111** and transmits the message to the new terminal **1D** in a unicast manner. The reception confirmation message **111** includes a message kind code indicative of the reception confirmation, a destination terminal address (address of the radio terminal ID), a group identifier, a transmission terminal address and user information of transmission terminal. As the user information, the user name is set, for example. The new terminal **1D** registers the transmission terminal address and the user information, which are extracted from the received reception confirmation message within a fixed time (T_5) in the terminal list **260B**.

and thereafter participates in the group communication as a member of the CUG, reading on the claimed "member information generator that generates in a member information storage a member list that stores member information of a member, who belongs to the group, based on the received invite mail and the received contact mail, wherein an entry in the member list is generated from member information extracted from the received contact mail, the received contact mail being received from the mail exchange terminal devices of the other existing members, other than the specific mail exchange terminal device," (paragraphs 6, 83-85 and 88).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to allow a new terminal to extract information about members of a closed communication group upon joining the group as taught by Kawaguchi et al., in the communication method of Waesterlid, in order to allow users to communicate in a group with other member wireless communication devices.

However, the combination of Waesterlid and Eiden et al., as modified by Kawaguchi et al., fails to specifically disclose that the time the group is formed is included in correspondence.

In the same field of endeavor, Mizutani et al. clearly show and disclose a communication method to perform an on-demand type of group communication among a plurality of communication terminals, wherein a terminal that communicates sends a packet with appending the information about a valid time

period of the group, as well as its own identification information, then a terminal that received the packet storing the identification information and the information about the valid time period that are included in the packet, reading on the claimed "group identification information comprises user identification information of the terminal device of a member who forms the group and a time when said group is formed," (fig. 3, paragraphs 12, 16). A communication terminal that desires to communicate in this party forms a momentary group with adjoining communication terminals and avoids the increase of the amount of communication attendant on broadcast by communicating only with the members of this group. The structure of the packet that is used consists of header and payload that is the content of data. The header consists of packet ID, valid time period of packet, hop count, group ID, originator ID, belonging to group time period, and error correcting code. Group ID **34** is a unique identifier given to a group, reading on the claimed "wherein the group identification information is a unique identifier for each group, and the group identification information can be generated at the terminal device of the member who forms the group," (paragraphs 45, 46).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to include within a transmitted packet, the life of the communication group and the group's ID as taught by Mizutani et al., in the communication method of Waesterlid and Eiden et al., as modified by

Kawaguchi et al., in order to allow users to communicate in a group with other member wireless communication devices.

Consider **claim 12**, Waesterlid clearly shows and discloses a connectionless status reporting method that allows members of an affinity group to send status information to and receive status information from other members of the affinity group, which is well-suited for mobile communication networks, wherein each member of the affinity group is provided with a communication device. Each communication device includes a memory for storing memory status information, reading on the claimed "mail exchange terminal device for exchanging mail with other mail exchange terminal devices via a communications network, comprising a member information storage that stores member information of a member, who belongs to a group for exchanging mail," (pg. 2 lines 15-29). A member of the affinity group can withdraw from the group by sending a resignation message to the group administrator. Receipt of a resignation message by the group administrator spawns a Group Update message deleting the resigning member from the group, reading on the claimed "mail transmitter that transmits mail to a mail exchange terminal device of another member, who belongs to the group, via said communications network according to the member information stored in said member information storage; a withdrawal mail transmitter that transmits withdrawal mail including information of withdrawal from the group to mail exchange terminal devices of all other members listed in the stored member information via said communications

network; a withdrawal mail receiver that receives withdrawal mail, including information, which indicates that another member is withdrawing from the group, from another mail exchange terminal device via said communications network," (pg. 12 lines 4).

The membership request message contains data corresponding to each member of the affinity group, wherein the member data may include, for example, the name, address, telephone number, and current status of each member. When a group update message is sent to a messaging server and then forwarded to each member of the affinity group. The group update message contains a list of all members of the group, including the newly added member, reading on the claimed "group identification information indicating the group exchanging the mail is added to the mail to be exchanged among said terminal devices of the members who belong to the group, and the group identification information includes user information of the terminal device of a member who forms the group," (pg.12 line 28- pg. 13 line 7, pg. 14 lines 2-14).

However, Waesterlid fails to specifically disclose that the resigning member deletes member information.

In the same field of endeavor, Kawaguchi et al. clearly show and disclose a group communication method, which can autonomously build up a closed communication network among a plurality of, unspecified communication terminals. When the user of the leaving terminal **1D** selects the leaving input key **42** on the console screen and performs inputting by selecting one of the group

identifiers **46** displayed on the screen, the leaving terminal **1D** transmits a leaving communication message **112** in a multicast manner to the constituting terminals of the CUG having the selected group identifier, and thereafter deletes the administration information entry having the group identifier from the group list **250B** and deletes the terminal list **260B** corresponding to the administration information entry. Upon receiving the leaving communication message **112**, other constituting terminals (**1A**, **1B**, **1C**) of the CUG delete the address of the leaving terminal **1D** which the received message indicates from the terminal lists **260B** and inform the security manager processing part of the leaving communication message **112** and cancels the P-P connection permission of the leaving terminal **1D**. When the terminal list **260B** becomes empty as a result of the fact which is mentioned above, the leaving terminal is deleted from the terminal list **260B** or the radio terminal which does not respond in the keep-alive processing is deleted from the terminal list **260B**, the administration information entry corresponding to the terminal list is deleted from the group list **250B** and the group communication at the corresponding CUG is finished, reading on the claimed "member information deleter that deletes member information of all members from said member information storage belonging to the group in response to the withdrawal mail transmitter transmitting the withdrawal mail, wherein the member information deleter is configured to delete an member information in the member information storage corresponding to the withdrawing member based on the received withdrawal mail," (paragraphs 6, 89-92).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to allow a new terminal to extract information about members of a closed communication group upon joining the group as taught by Kawaguchi et al., in the communication method of Waesterlid, in order to allow users to communicate in a group with other member wireless communication devices.

However, the combination of Waesterlid and Eiden et al., as modified by Kawaguchi et al., fails to specifically disclose that the time the group is formed is included in correspondence.

In the same field of endeavor, Mizutani et al. clearly show and disclose a communication method to perform an on-demand type of group communication among a plurality of communication terminals, wherein a terminal that communicates sends a packet with appending the information about a valid time period of the group, as well as its own identification information, then a terminal that received the packet storing the identification information and the information about the valid time period that are included in the packet, reading on the claimed "group identification information comprises user identification information of the terminal device of a member who forms the group and a time when said group is formed," (fig. 3, paragraphs 12, 16). A communication terminal that desires to communicate in this party forms a momentary group with adjoining communication terminals and avoids the increase of the amount of communication attendant on broadcast by communicating only with the members

of this group. The structure of the packet that is used consists of header and payload that is the content of data. The header consists of packet ID, valid time period of packet, hop count, group ID, originator ID, belonging to group time period, and error correcting code. Group ID **34** is a unique identifier given to a group, reading on the claimed "wherein the group identification information is a unique identifier for each group, and the group identification information can be generated at the terminal device of the member who forms the group," (paragraphs 45, 46).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to include within a transmitted packet, the life of the communication group and the group's ID as taught by Mizutani et al., in the communication method of Waesterlid and Eiden et al., as modified by Kawaguchi et al., in order to allow users to communicate in a group with other member wireless communication devices.

Consider **claim 15, 21 and 25**, Waesterlid clearly shows and discloses a connectionless status reporting method that allows members of an affinity group to send status information to and receive status information from other members of the affinity group, which is well-suited for mobile communication networks, wherein each member of the affinity group is provided with a communication device. Each communication device includes program memory **112** and a microprocessor **110**, wherein the microprocessor controls the operation of the device according to the instructions stored in the memory, reading on the claimed

"mail exchange terminal device for exchanging mail with other mail exchange terminal devices via a communications network, comprising a memory that stores a program and data, a processor that executes said program, and a communications device that communicates with other mail exchange terminal devices, wherein said program stored in memory causes said processor to execute storing member information of existing members, who belong to a group for exchanging mail, in said memory in advance; computer-readable storage medium on which a program to be executed by each mail exchange terminal is recorded; and a carrier wave having a program data signal," (fig. 2, pg. 2 lines 15-29, pg. 7 lines 17-28).

A first user sends a membership request message to one or more prospective members whom the first user would like to join the affinity group (pg. 12 lines 18-21). The membership request message contains data corresponding to each member of the affinity group, and when the prospective member accepts the request for membership message, the client application on the new member's communication device creates an affinity group database and stores it in memory, reading on the claimed "causing the communications device to receive an invitation mail inviting participation in a group, which is already formed by users of other mail exchange terminal devices, from a mail exchange terminal device of a specific member via said communications network," (pg. 13 lines 3-4, lines 20-22).

Recipients of a membership request, sent by a first user or group administrator, can reply to the invitation by sending a membership reply message either accepting or declining the invitation to join the affinity group. Those accepting the invitation are added to the group along with the group administrator, reading on the claimed "causing the communications device to transmit participation mail, including self-member information of a newly joining member, to the mail exchange terminal device of the specific member via the communications network at the time of joining the group where participation was invited by the received invitation mail," (pg. 11 lines 20-23). New members also receive a group update message that contains information concerning the existing members and their current status, reading on the claimed "causing the communications device to receive contact mail, which is transmitted from the mail exchange terminal devices of other existing members via said communications network in response to the mail transmitted to said mail exchange terminal device of the specific member, and includes member information of an existing member," (pg. 11 lines 26-28).

The membership request message contains data corresponding to each member of the affinity group, wherein the member data may include, for example, the name, address, telephone number, and current status of each member. When a group update message is sent to a messaging server and then forwarded to each member of the affinity group. The group update message contains a list of all members of the group, including the newly added member,

reading on the claimed "group identification information indicating the group exchanging the mail is added to the mail to be exchanged among said terminal devices of the members who belong to the group, and the group identification information includes user information of the terminal device of a member who forms the group," (pg.12 line 28- pg. 13 line 7, pg. 14 lines 2-14).

However, Waesterlid fails to specifically disclose that the contact mail is from existing members and not the specific member.

In the same field of endeavor, Kawaguchi et al. clearly show and disclose a group communication method, which can autonomously build up a closed communication network among a plurality of, unspecified communication terminals. When the user selects the connection input key **41** and selects the new CUG **45** at the new terminal **1D**, the new calling message **101** is broadcast to a large number of unspecified radio terminals. Upon receiving the group communication message **108**, the terminal **1D** registers a new administration information entry including the group identifier and the group kind extracted from the received message in the provisional group list **250B**. When the user of the terminal **1D** selects the group identifier, which is indicated by the group communication message and instructs the connection on the console screen, the terminal **1D** transmits a participation confirmation message **109** in a unicast manner to a transmission source of the group communication message (here, the radio terminal **1B**). The radio terminal **1B** which becomes the transmission source of the addition notice message 110 and other radio terminals (**1A**, **1C**) of

the CUG (closed communication) which have received the addition notice message **110** respectively generate the reception confirmation message **111** and transmits the message to the new terminal **1D** in a unicast manner. The reception confirmation message **111** includes a message kind code indicative of the reception confirmation, a destination terminal address (address of the radio terminal ID), a group identifier, a transmission terminal address and user information of transmission terminal. As the user information, the user name is set, for example. The new terminal **1D** registers the transmission terminal address and the user information, which are extracted from the received reception confirmation message within a fixed time (T5) in the terminal list **260B** and thereafter participates in the group communication as a member of the CUG, reading on the claimed "storing member information of members, who belong to the group, in said memory based on the received invitation mail and the received contact mail, by extracting member information from the received contact mail and generating an entry in a memory list for a member corresponding to the extracted member information, the received contact mail being received from the mail exchange terminal devices of the other existing members, other than the mail exchange terminal device of the specific member," (paragraphs 6, 83-85 and 88).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to allow a new terminal to extract information about members of a closed communication group upon joining the

group as taught by Kawaguchi et al., in the communication method of Waesterlid, in order to allow users to communicate in a group with other member wireless communication devices.

However, the combination of Waesterlid and Eiden et al., as modified by Kawaguchi et al., fails to specifically disclose that the time the group is formed is included in correspondence.

In the same field of endeavor, Mizutani et al. clearly show and disclose a communication method to perform an on-demand type of group communication among a plurality of communication terminals, wherein a terminal that communicates sends a packet with appending the information about a valid time period of the group, as well as its own identification information, then a terminal that received the packet storing the identification information and the information about the valid time period that are included in the packet, reading on the claimed "group identification information comprises user identification information of the terminal device of a member who forms the group and a time when said group is formed," (fig. 3, paragraphs 12, 16). A communication terminal that desires to communicate in this party forms a momentary group with adjoining communication terminals and avoids the increase of the amount of communication attendant on broadcast by communicating only with the members of this group. The structure of the packet that is used consists of header and payload that is the content of data. The header consists of packet ID, valid time period of packet, hop count, group ID, originator ID, belonging to group time

period, and error correcting code. Group ID **34** is a unique identifier given to a group, reading on the claimed “wherein the group identification information is a unique identifier for each group, and the group identification information can be generated at the terminal device of the member who forms the group,” (paragraphs 45, 46).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to include within a transmitted packet, the life of the communication group and the group's ID as taught by Mizutani et al., in the communication method of Waesterlid and Eiden et al., as modified by Kawaguchi et al., in order to allow users to communicate in a group with other member wireless communication devices.

Consider **claims 16, 22 and 26**, Waesterlid clearly shows and discloses a connectionless status reporting method that allows members of an affinity group to send status information to and receive status information from other members of the affinity group, which is well-suited for mobile communication networks, wherein each member of the affinity group is provided with a communication device. Each communication device includes program memory **112** and a microprocessor **110**, wherein the microprocessor controls the operation of the device according to the instructions stored in the memory, reading on the claimed “mail exchange terminal device for exchanging mail with other mail exchange terminal devices via a communications network, comprising a memory that stores a program and data, a processor that executes said program, and a

communications device that communicates with other mail exchange terminal devices, wherein said program stored in memory causes said processor to execute storing member information of existing members, who belong to a group for exchanging mail, in said memory in advance; computer-readable storage medium on which a program to be executed by each mail exchange terminal is recorded; and a carrier wave having a program data signal," (fig. 2, pg. 2 lines 15-29, pg. 7 lines 17-28). A member of the affinity group can withdraw from the group by sending a resignation message to the group administrator. Receipt of a resignation message by the group administrator spawns a Group Update message deleting the resigning member from the group, reading on the claimed "transmitting mail to mail exchange terminal devices of other members who belong to the group, via said communications network according to the stored member information; causing said communications device to transmit a withdrawal mail including information of withdrawal from the group to the mail exchange terminal devices of all other members according to the stored member information via said communications network; causing said communications device to receive the withdrawal mail, including information, indicating that another member is withdrawing from the group, from another mail exchange terminal device via said communications network," (pg. 12 lines 4).

The membership request message contains data corresponding to each member of the affinity group, wherein the member data may include, for example, the name, address, telephone number, and current status of each

member. When a group update message is sent to a messaging server and then forwarded to each member of the affinity group. The group update message contains a list of all members of the group, including the newly added member, reading on the claimed "group identification information indicating the group exchanging the mail is added to the mail to be exchanged among said terminal devices of the members who belong to the group, and the group identification information comprises user information of the terminal device of a member who forms the group," (pg.12 line 28- pg. 13 line 7, pg. 14 lines 2-14).

However, Waesterlid fails to specifically disclose that the resigning member deletes member information.

In the same field of endeavor, Kawaguchi et al. clearly show and disclose a group communication method, which can autonomously build up a closed communication network among a plurality of, unspecified communication terminals. When the user of the leaving terminal **1D** selects the leaving input key **42** on the console screen and performs inputting by selecting one of the group identifiers **46** displayed on the screen, the leaving terminal **1D** transmits a leaving communication message **112** in a multicast manner to the constituting terminals of the CUG having the selected group identifier, and thereafter deletes the administration information entry having the group identifier from the group list **250B** and deletes the terminal list **260B** corresponding to the administration information entry. Upon receiving the leaving communication message **112**, other constituting terminals (**1A**, **1B**, **1C**) of the CUG delete the address of the

leaving terminal **1D** which the received message indicates from the terminal lists **260B** and inform the security manager processing part of the leaving communication message **112** and cancels the P-P connection permission of the leaving terminal **1D**. When the terminal list **260B** becomes empty as a result of the fact which is mentioned above, the leaving terminal is deleted from the terminal list **260B** or the radio terminal which does not respond in the keep-alive processing is deleted from the terminal list **260B**, the administration information entry corresponding to the terminal list is deleted from the group list **250B** and the group communication at the corresponding CUG is finished, reading on the claimed "deleting member information of all members from said member information storage belonging to the group in response to the communications device transmitting the withdrawal mail, and deleting member information of said another member from said memory in response to said communications device receiving the withdrawal mail indicating that another member is withdrawing from the group," (paragraphs 6, 89-92).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to allow a new terminal to extract information about members of a closed communication group upon joining the group as taught by Kawaguchi et al., in the communication method of Waesterlid, in order to allow users to communicate in a group with other member wireless communication devices.

However, the combination of Waesterlid and Eiden et al., as modified by Kawaguchi et al., fails to specifically disclose that the time the group is formed is included in correspondence.

In the same field of endeavor, Mizutani et al. clearly show and disclose a communication method to perform an on-demand type of group communication among a plurality of communication terminals, wherein a terminal that communicates sends a packet with appending the information about a valid time period of the group, as well as its own identification information, then a terminal that received the packet storing the identification information and the information about the valid time period that are included in the packet, reading on the claimed "group identification information comprises user identification information of the terminal device of a member who forms the group and a time when said group is formed," (fig. 3, paragraphs 12, 16). A communication terminal that desires to communicate in this party forms a momentary group with adjoining communication terminals and avoids the increase of the amount of communication attendant on broadcast by communicating only with the members of this group. The structure of the packet that is used consists of header and payload that is the content of data. The header consists of packet ID, valid time period of packet, hop count, group ID, originator ID, belonging to group time period, and error correcting code. Group ID **34** is a unique identifier given to a group, reading on the claimed "wherein the group identification information is a unique identifier for each group, and the group identification information can be

generated at the terminal device of the member who forms the group,”
(paragraphs 45, 46).

Therefore, it would have been obvious to a person of ordinary skill in the art at the time the invention was made to include within a transmitted packet, the life of the communication group and the group's ID as taught by Mizutani et al., in the communication method of Waesterlid and Eiden et al., as modified by Kawaguchi et al., in order to allow users to communicate in a group with other member wireless communication devices.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to JAIME M. HOLLIDAY whose telephone number is (571)272-8618. The examiner can normally be reached on Monday through Friday 7:30am to 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, V. Paul Harper can be reached on (571) 272-7605. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/VINCENT P. HARPER/
Supervisory Patent Examiner, Art Unit 2617

/Jaime M Holliday/
Examiner, Art Unit 2617